



#4 2621

UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. MBHB 01-100)

PATENT

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Technology Center 2600

In the Application of:

Rudger Rubbert, et al.

Serial No.: 09/835,007

Filed: April 13, 2001

For: Methods For Registration of  
Three-Dimensional Frames to  
Create Three-Dimensional  
Virtual Models Of Objects

Confirmation No.: 3166

Group Art Unit: 2621

TRANSMITTAL LETTER

Commissioner for Patents  
Washington DC 20231

Sir:

1. We are transmitting herewith the attached:
  1. Information Disclosure Information
  2. Form PTO 1449
  3. Cited References
  4. Postcard
2. With respect to additional fees:
  - A. ☒ No additional fee is required.
  - B. ☐ Attached is a check in the amount of \$\_\_\_\_\_.
  - C. ☐ Charge the total additional fee to our Deposit Account No. 13-2490.
3. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.
4. **CERTIFICATE OF MAILING UNDER 37 CFR § 1.8:** The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this 12 day of July, 2001.

By Thomas A. Fairhall  
Thomas A. Fairhall  
Reg. No. 34,591



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INFORMATION DISCLOSURE STATEMENT  
PURSUANT TO 37 C.F.R. §§ 1.97-1.98

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.97 - 1.98, the Applicant wishes to make the following references of record in the above-identified application. A copy of each reference is enclosed. This Information Disclosure Statement is in compliance with the duty of candor as set forth in 37 C.F.R. § 1.56. These references are also listed on the enclosed PTO Form 1449. It is requested that the documents be given careful consideration and that they be cited of record in the prosecution history of the present application so that they will appear on the face of the patent issuing of the present application.

In the judgment of the undersigned, portions of the references may be material to the examination of the pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative importance of any portion of the references. This Statement is not a representation that the cited references have effective dates early enough to be "prior art" within the meaning of 35 USC sections 102 or 103.

### **CITED REFERENCES**

#### **U.S. PATENTS:**

1. U.S. Patent No. 4,185,918, DiMatteo et al., issued January 29, 1980
2. U.S. Patent No. 4,500,206, Cole et al., issued February 19, 1985
3. U.S. Patent No. 4,575,805, Moermann et al., issued March 11, 1986
4. U.S. Patent No. 4,611,288, Duret et al., issued September 9, 1986
5. U.S. Patent No. 4,663,720, Duret et al., issued May 5, 1987
6. U.S. Patent No. 4,825,263, Desjardins et al., issued April 25, 1989
7. U.S. Patent No. 4,837,732, Brandestini et al., issued June 6, 1989
8. U.S. Patent No. 4,867,570, Sorimachi et al., issued September 19, 1989
9. U.S. Patent No. 4,873,449, Paramythioti et al., issued October 10, 1989
10. U.S. Patent No. 5,011,405, Lemchen, issued April 30, 1991
11. U.S. Patent No. 5,027,281, Rekow et al, issued June 25, 1991
12. U.S. Patent No. 5,085,502, Womack et al., issued February 4, 1992
13. U.S. Patent No. 5,166,878, Poelstra, issued November 24, 1992
14. U.S. Patent No. 5,289,264, Steinbichler, issued February 22, 1994

15. U.S. Patent No. 5,309,243, Tsai, issued May 3, 1994
16. U.S. Patent No. 5,372,502, Massen et al, issued December 13, 1994
17. U.S. Patent No. 5,424,836, Weise et al., issued June 13, 1995
18. U.S. Patent No. 5,431,562, Andreiko et al, issued June 11,1995
19. U.S. Patent No. 5,545,039, Mushabac, issued August 13, 1996
20. U.S. Patent No. 5,608,211, Hirono et al., issued March 4, 1997
21. U.S. Patent No. 5,615,003, Hermary et al., issued March 25, 1997
22. U.S. Patent No. 5,878,159, Taleblou et al., issued March 2, 1999
23. U.S. Patent No. 5,970,499, Smith et al., issued October 19, 1999
24. U.S. Patent No. 5,975,893, Chishti et al, issued November 2, 1999
25. U.S. Patent No. 6,068,482, Snow, issued May 30, 2000
26. U.S. Patent No. 6,099,314, Kopelman et al., issued August 8, 2000
27. U.S. Patent No. 6,217,325, Chishti et al, issued April 17, 2001
28. U.S. Patent No. 6,227,850, Chishti et al, issued May 8, 2001
29. U.S. Patent No. 6,227,851, Chishti et al., issued May 8, 2001

**FOREIGN PATENTS:**

1. European Patent No. EP 0 250 993, Mörmann, published June 12, 1987\*
2. European Patent No. EP 0 391 532 A2, NKK Corporation, published October 10, 1990
3. German Patent Application No. DE 42 18219, Weise, et al., December 9, 1993\*\*
4. German Patent Application No. DE 44 45 552, Strehl et al., June 29, 1995\*\*\*
5. German Patent Application No. DE 38 29 925, published March 15, 1990\*\*\*\*
6. German Patent Application No. DE 44 36 500, published November 5, 1995\*\*\*\*\*

7. German Patent Application No. DE 196 38 727, published March 19, 1998, with English translation attached
8. Published PCT Application No. PCT/EP90/01715, publication No. WO 91/05520, published May 02, 1991, with English translation of same
9. Published PCT Application No. PCT/DE97/01796, publication No. WO 98/10243, published August 19, 1997, with English translation of same
10. Published PCT Application No. PCT/DE97/01797, publication No. WO 98/11403, published March 19, 1998, with English translation of same
11. Published PCT Application No. PCT/DE97/01798, publication No. WO 98/11404, published March 19, 1998, with English translation of same
12. Published PCT Application No. PCT/DE99/01277, publication No. WO 99/60332, published April 29, 1999, with English translation of same
13. European Patent Application 0 294 577, LBP Partnership, published December 14, 1988
14. Canadian Patent Application CA 2,163,934, Hermary et al., May 30, 1996

#### **OTHER DOCUMENTS**

1. Syrinx Technologies, Inc. publication, "3D Scanner", circa 1998
2. Journal of Prosthetic Dentistry article, Dianne Rekow article, "*Computer-aided Design and Manufacturing in Dentistry: A Review of the State of the Art*", pp. 512-516, October 1987
3. JADA, Vol. 118, Karl F. Leinfelder et al. article, "*A New Method for Generating Ceramic Restorations: A CAD-CAM System*", pp. 703-707, June 1989

4. Optical Engineering, Vol. 33 No. 6, Yee, et al., "*Three-dimensional Imaging System*", pp. 2070-2075, June 1994

**STATEMENT OF RELEVANCE:**

\* The content of U.S. Patent 4,837,732 is believed to be essentially identical to the content of European Patent 0 250 993.

\*\* The content of U.S. Patent 5,424,836 is believed to be essentially identical to the content of German Patent Application 42 18219.

\*\*\* The content of U.S. Patent 5,608,211 is believed to be essentially identical to the content of German Patent DE 44 45 552.

\*\*\*\* The content of U.S. Patent 5,372,502 is believed to be essentially identical to the content of German Patent Application DE 3829925.

\*\*\*\*\* Statement of Relevance for German Patent DE 44 36 500A is attached to patent.

Respectfully Submitted,

McDonnell Boehnen Hulbert & Berghoff

Date:

July 12, 2001

By:

Thomas A. Fairhall

Thomas A. Fairhall

Reg. No. 34,591

## CERTIFICATE OF MAILING

The undersigned hereby certifies that the foregoing **Information Disclosure Statement Pursuant to 37 C.F.R. §§ 1.97-1.98** is being deposited in the United States Postal Service, as first class mail postage prepaid, in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231 on this 12 day of July, 2001.

  
\_\_\_\_\_  
Thomas A. Fairhall

FORM PTO-1449  
(Rev. 2-32)

U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

Serial No.

01-100

09/835,007

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

**Applicant:**  
Rudger Rubbert, et al

**Filing Date:**  
04/13/01

**Group:**  
2621



**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
AWC	4,185,918	01/29/80	DiMatteo et al.	356	375	
	4,500,206	02/19/85	Cole et al.	356	376	
	4,575,805	03/11/86	Moermann et al	364	474	
	4,611,288	09/09/86	Duret et al.	364	474	
	4,663,720	05/05/87	Duret et al.	364	474	
	4,825,263	04/25/89	Desjardins et al	356	376	
	4,837,732	06/06/89	Brandestini et al.	364	413.28	
	4,867,570	09/19/89	Sorimachi et al	356	376	
	4,873,449	10/10/89	Paramythioti et al.	250	560	
	5,011,405	04/30/91	Lemchen	433	24	
	5,027,281	06/25/91	Rekow et al.	364	474.24	
	5,085,502	02/04/92	Womack et al.	356	376	
	5,166,878	11/24/92	Poelstra	364	424.01	
	5,289,264	02/22/94	Steinbichler	356	376	
	5,309,243	05/03/94	Tsai	348	221	
	5,372,502	12/13/94	Massen, et al.	433	215	
	5,424,836	06/13/95	Weise et al.	356	376	
	5,431,562	06/11/95	Andreiko et al.	433	24	
	5,545,039	08/13/96	Mushabac	433	215	
	5,608,211	03/04/97	Hirono et al.	250	234	
	5,615,003	03/25/97	Hermay et al.	356	3.03	
	5,878,159	03/02/99	Taleblou et al.	382	128	

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(Rev. 2-32)

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U.S. PATENT DOCUMENTS (continued)

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
Awc	5,970,499	10/19/99	Smith et al.	707	104	
	5,975,893	11/02/99	Chisti et al	433	06	
	6,068,482	05/30/00	Snow	433	223	
	6,099,314	08/08/00	Kopelman et al.	433	213	
	6,217,325	04/17/01	Chishti et al.	433	24	
	6,227,850	05/08/01	Chishti et al.	433	24	
	6,227,851	05/08/01	Chishti et al.	433	24	

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**FOREIGN PATENT DOCUMENTS**

		Document Number							Date	Country	Class	Subclass	Translation	
													Yes	No
<i>Am</i>		EP	02	5	0	9	9	3	06/12/87	Europe	—	—		X*
		EP	02	9	4	5	7	7	04/26/88	Europe	—	—	X	
		EP	03	9	1	5	3	2	03/05/90	Europe	—	—	X	
		DE	42	1	8	2	1	9	12/09/93	Germany	—	—		X*
		DE	44	4	5	5	5	2	06/29/95	Germany	—	—		X*
		DE	44	3	6	5	0	0	11/05/95	Germany	—	—		X*
		DE	38	2	9	9	2	5	03/15/90	Germany	—	—		X*
		DE	19	6	38	7	2	7	03/19/98	Germany	—	—	X	
		WO	98	1	1	4	0	3	03/19/98	PCT	—	—	X	
		WO	91	0	5	5	2	0	05/02/91	PCT	—	—	X	
		WO	98	1	1	4	0	4	03/19/98	PCT	—	—	X	
		WO	99	6	0	3	3	2	11/25/99	PCT	—	—	X	
		WO	98	1	0	2	4	3	03/12/98	PCT	—	—	X	
		CA	2	1	63	9	3	4	05/30/96	Canada	—	—	X	

\*Statement of Relevance included

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(Rev. 2-32)U.S. Department of Commerce  
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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

AWC			Syrinx Technologies, Inc. publication, "3D Scanner", circa 1998
			Journal of Prosthetic Dentistry article, Dianne Rekow, M.S.M.E., D.D.S., "Computer-aided Design and Manufacturing in Dentistry: A Review of the State of the Art", pp. 512 - 516, October 1987
			Optical Engineering, Vo. 33 No. 6, Yee et al., "Three-dimensional Imaging System", pp. 2070-2075, June 1994
			JADA article, Vol. 118, Karl F. Leinfelder et al., "A New Method for Generating Ceramic Restorations: A CAD-CAM System", pp. 703 - 707, June 1989

EXAMINER

DATE CONSIDERED

11/29/04

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.